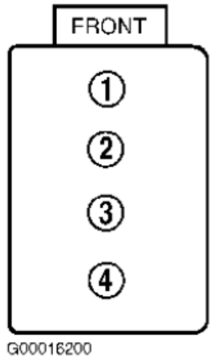
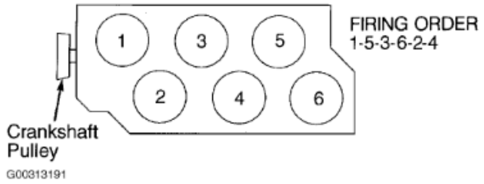
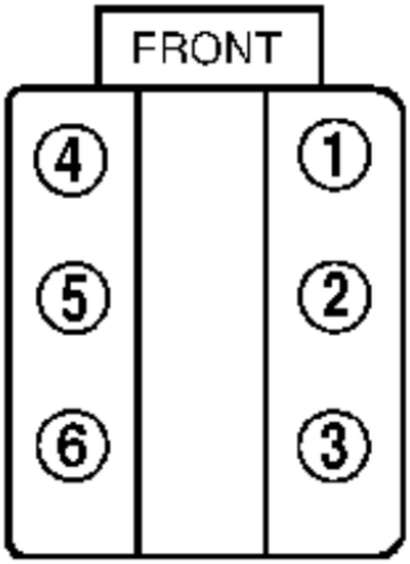
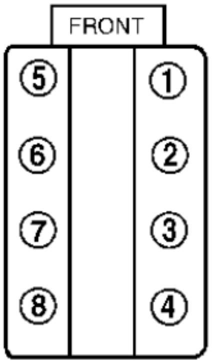
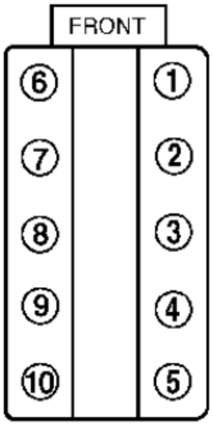
ENGINE PERFORMANCE

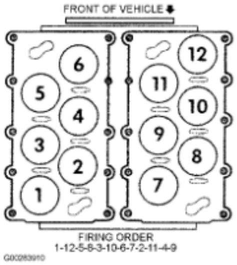
Firing Order & Cylinder Identification - Audi - All Models

FIRING ORDER & CYLINDER IDENTIFICATION

NOTE: **This information is intended as a quick reference for firing order and cylinder identification only. The information provided covers many vehicles and may include some information that does not apply to the vehicle you have currently selected.**

Engine Configuation	Firing Order	Cylinder Identification
In-Line 4	1-3-4-2	
V6		
3.2L	1-5-3-6-2-4	 FIRING ORDER 1-5-3-6-2-4 1 3 5 2 4 6 Crankshaft Pulley G00313191
All Others	1-4-3-6-2-5	

		 G00016204
V8	1-5-4-8-6-3-7-2	 G00016207
V10	1-6-5-10-2-7-3-8-4-9	 G00016210

W12	1-12-5-8-3-10-6-7-2-11-4-9	

2002-07 ENGINE PERFORMANCE

Mode 6 - A4, S4, RS4

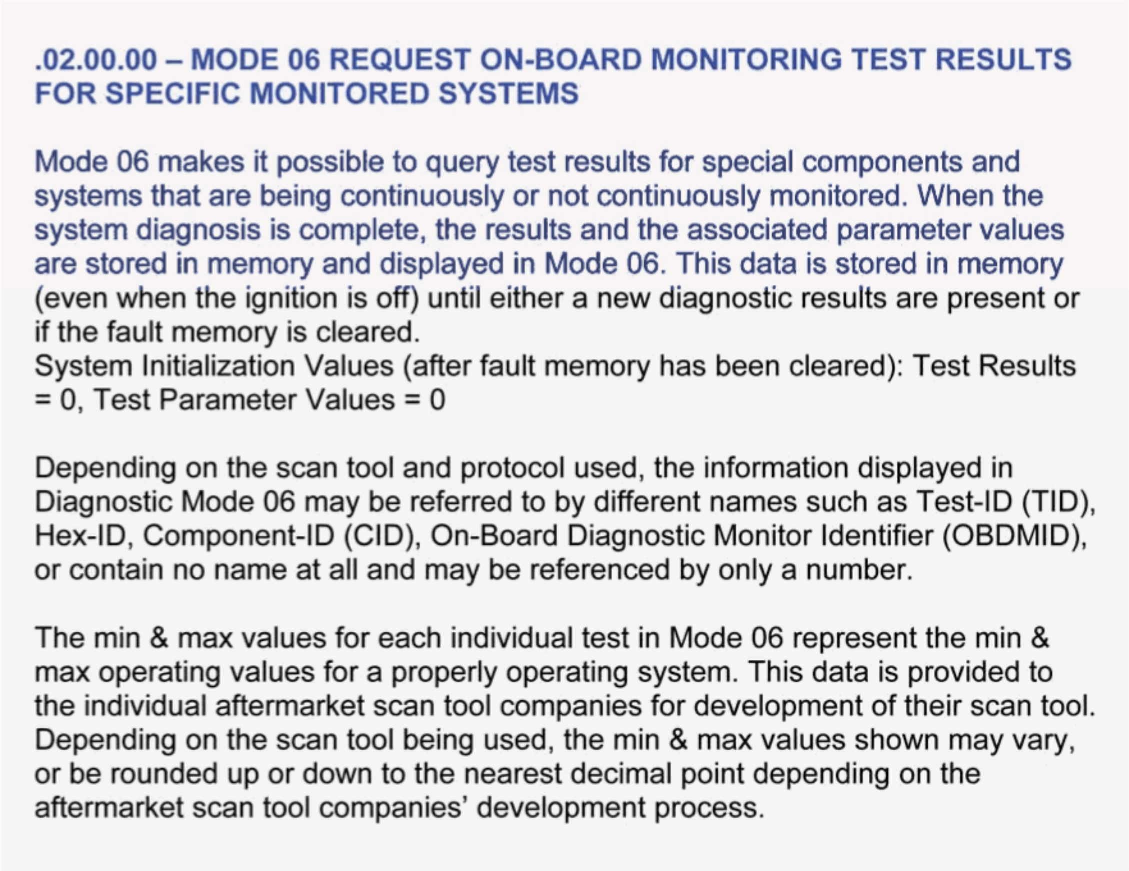
INTRODUCTION

Mode 6 is designed to allow access to the results of onboard diagnostic monitoring tests of specific components/systems that are not continuously monitored. These systems include the catalytic converter, EVAP system, oxygen sensor, oxygen sensor heater, EGR system, secondary AIR system, and sometimes misfire.

Mode 6 data is output from the PCM/ECM in hexadecimal form. The $ sign indicates a hexadecimal number. Depending on the software in the scanner, the output could be displayed in hexadecimal numbers (no conversion), raw data (conversion to decimal numbers), or measurable values (applying conversion factor to raw data).

Before reading mode 6 information, ensure that the monitor for the information you are accessing has run to completion. If the monitor is not complete, the mode 6 data will not be accurate.

MODE 6



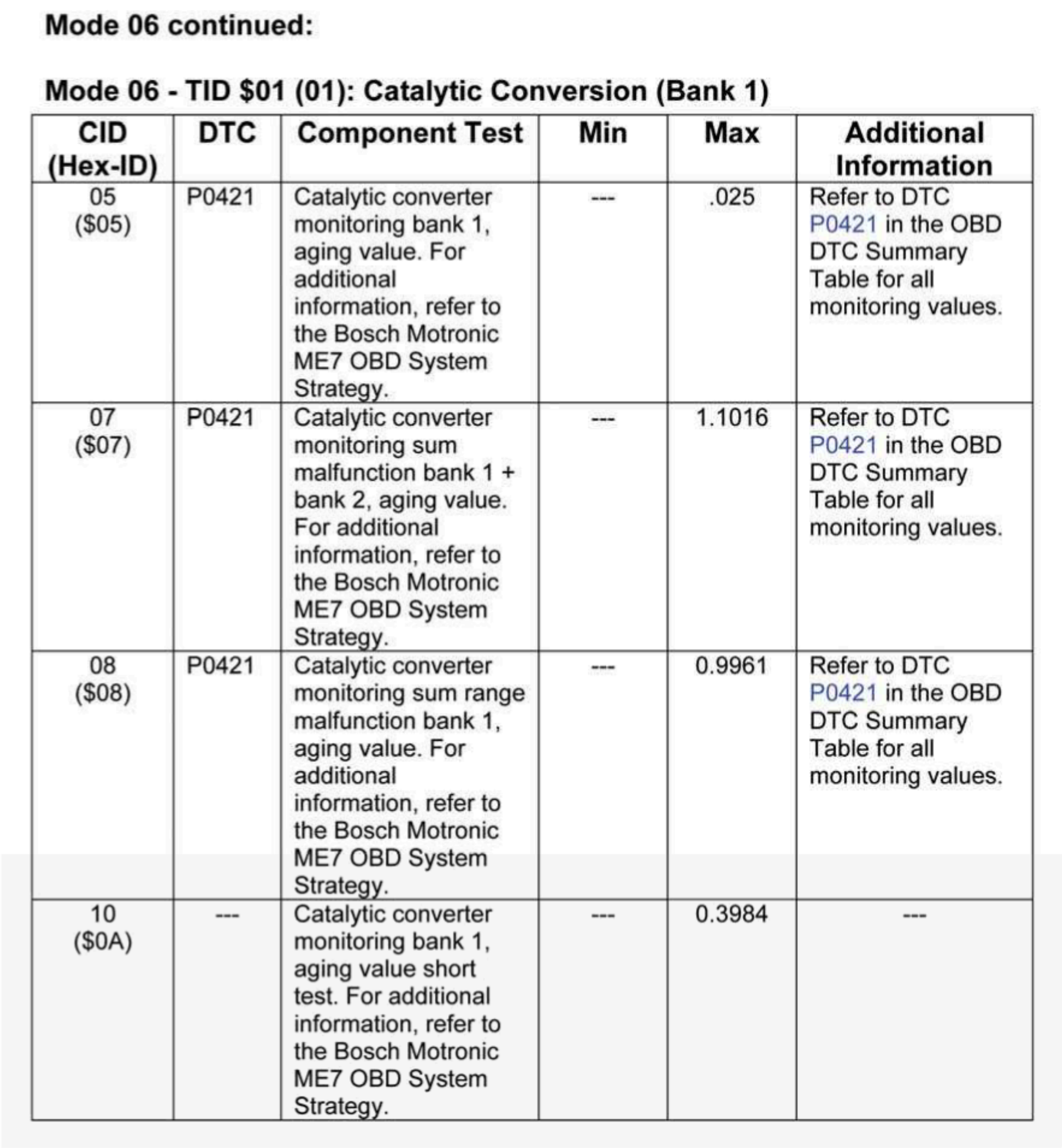
.02.00.00 – MODE 06 REQUEST ON-BOARD MONITORING TEST RESULTS FOR SPECIFIC MONITORED SYSTEMS

Mode 06 makes it possible to query test results for special components and systems that are being continuously or not continuously monitored. When the system diagnosis is complete, the results and the associated parameter values are stored in memory and displayed in Mode 06. This data is stored in memory (even when the ignition is off) until either a new diagnostic results are present or if the fault memory is cleared.
System Initialization Values (after fault memory has been cleared): Test Results = 0, Test Parameter Values = 0

Depending on the scan tool and protocol used, the information displayed in Diagnostic Mode 06 may be referred to by different names such as Test-ID (TID), Hex-ID, Component-ID (CID), On-Board Diagnostic Monitor Identifier (OBDMID), or contain no name at all and may be referenced by only a number.

The min & max values for each individual test in Mode 06 represent the min & max operating values for a properly operating system. This data is provided to the individual aftermarket scan tool companies for development of their scan tool. Depending on the scan tool being used, the min & max values shown may vary, or be rounded up or down to the nearest decimal point depending on the aftermarket scan tool companies' development process.

Fig. 1: Mode 6 Data (2000-05 3.0L AVK) (Fig. 1 Of 8)
Courtesy of AUDI OF AMERICA, INC.

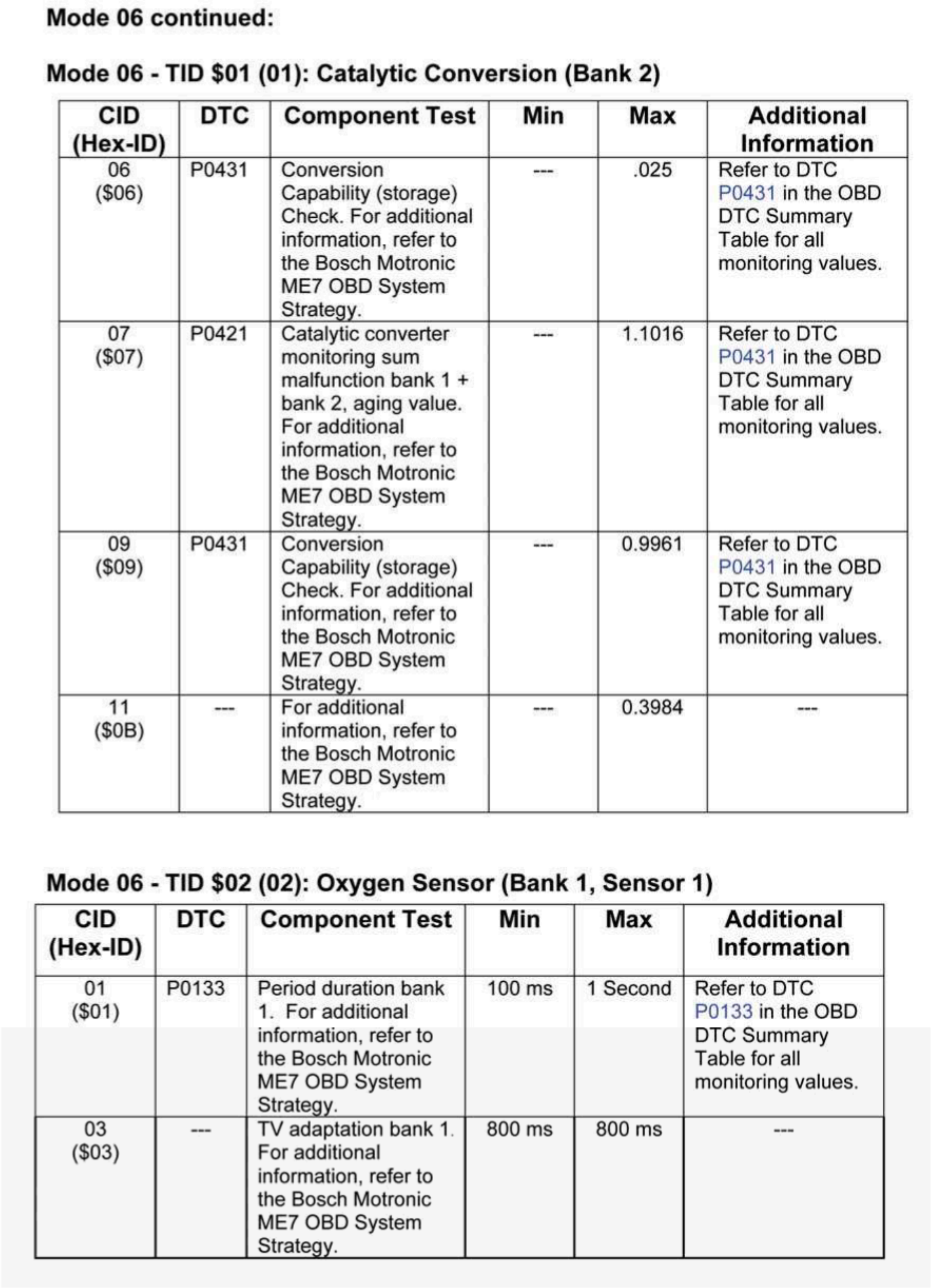


Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
05 ($05)	P0421	Catalytic converter monitoring bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
08 ($08)	P0421	Catalytic converter monitoring sum range malfunction bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
10 ($0A)	---	Catalytic converter monitoring bank 1, aging value short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

Fig. 2: Mode 6 Data (2000-05 3.0L AVK) (Fig. 2 Of 8)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
06 ($06)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
09 ($09)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
11 ($0B)	---	For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	P0133	Period duration bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0133 in the OBD DTC Summary Table for all monitoring values.
03 ($03)	---	TV adaptation bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

Fig. 3: Mode 6 Data (2000-05 3.0L AVK) (Fig. 3 Of 8)
Courtesy of AUDI OF AMERICA, INC.

Mode 06 continued:

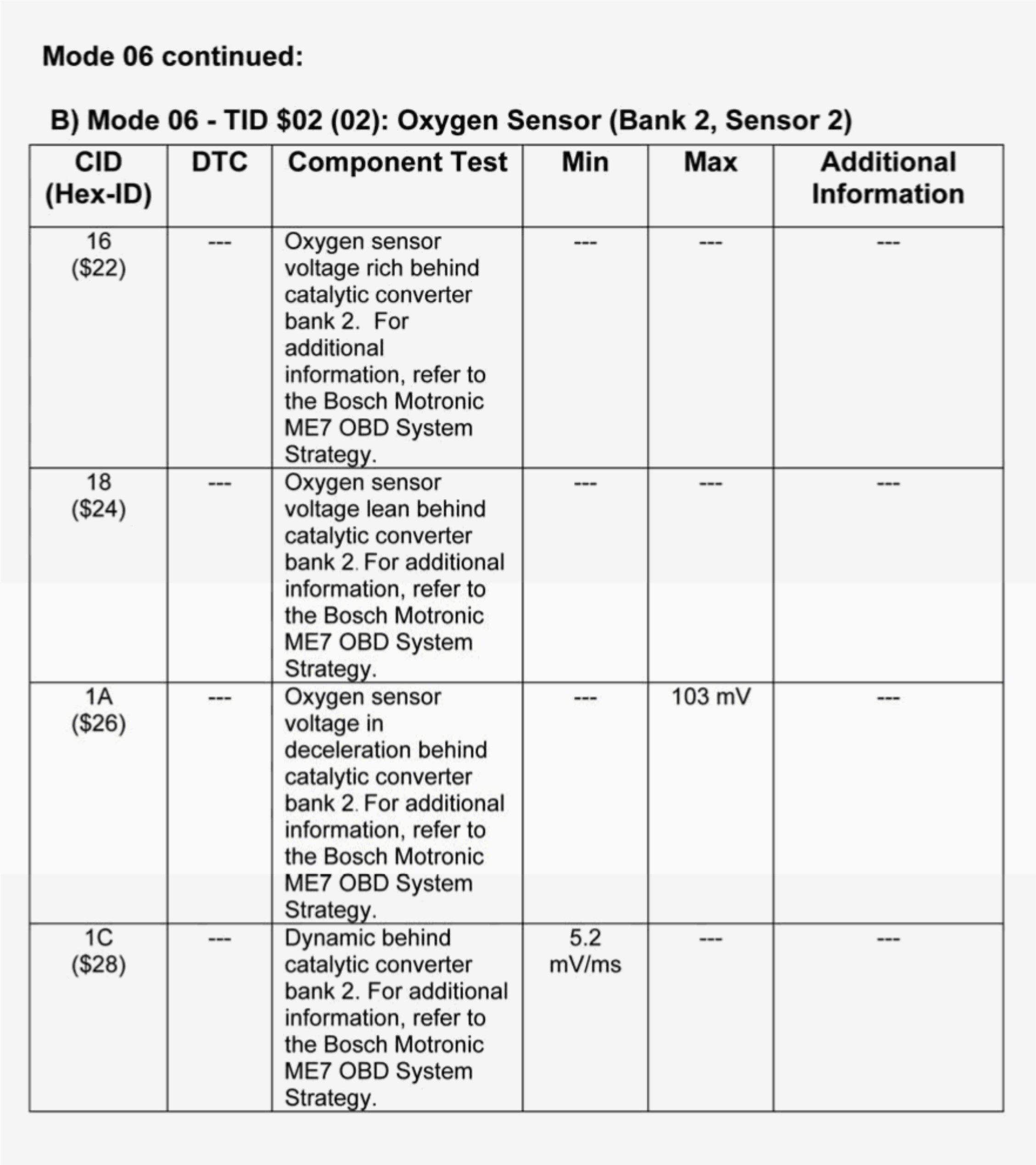
Mode 06 - TID $02 (02): Oxygen Sensor (Bank 2, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
02 ($02)	P0153	Period duration bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0153 in the OBD DTC Summary Table for all monitoring values.
04 ($04)	---	TV adaptation bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

A) Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
15 ($21)	---	Oxygen sensor voltage rich behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
17 ($23)	---	Oxygen sensor voltage lean behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
19 ($25)	---	Oxygen sensor voltage in deceleration behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	103 mV	---
1B ($27)	---	Dynamic behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	5.2 mV/ms	---	---

Fig. 4: Mode 6 Data (2000-05 3.0L AVK) (Fig. 4 Of 8)
Courtesy of AUDI OF AMERICA, INC.

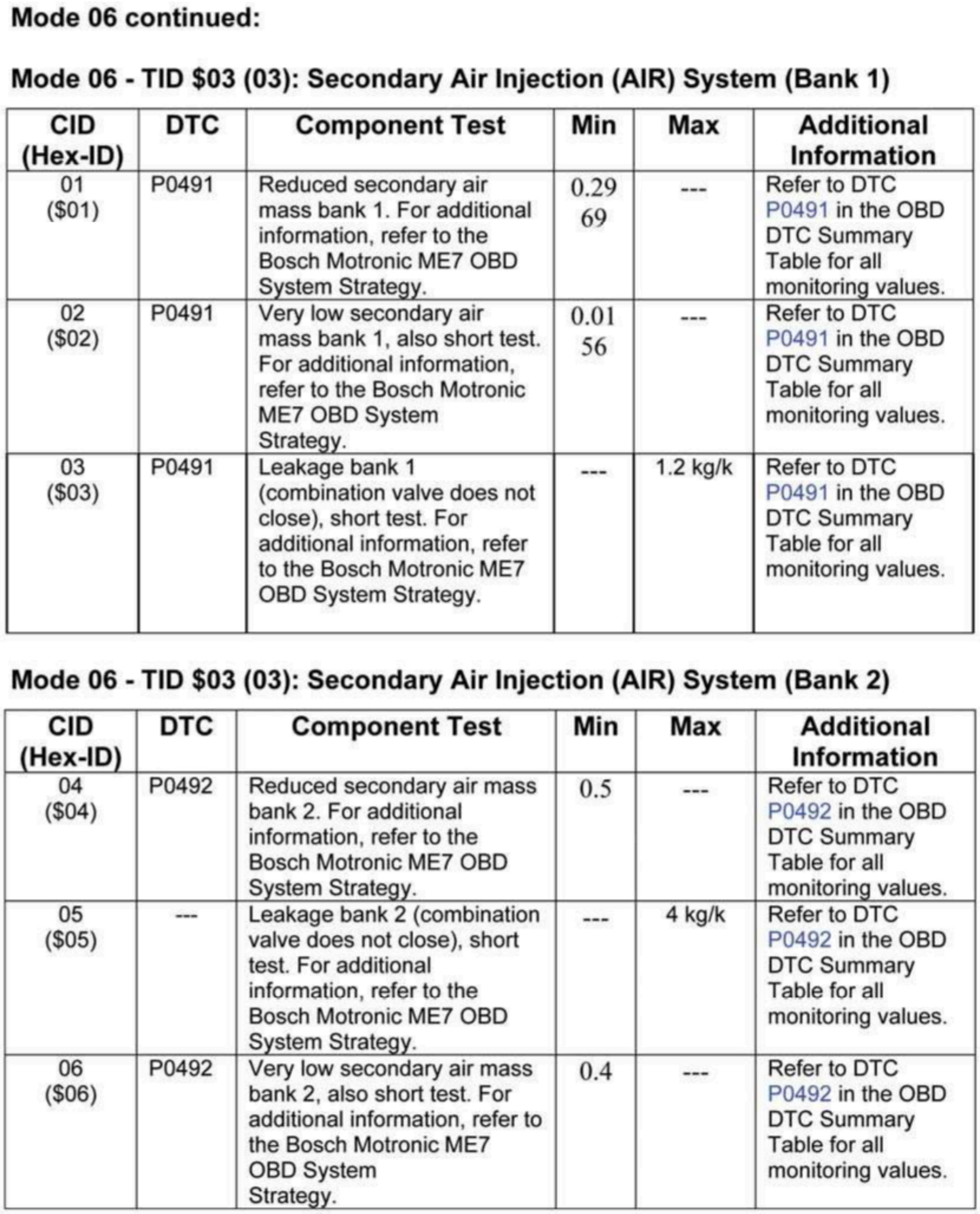


Mode 06 continued:

B) Mode 06 - TID $02 (02): Oxygen Sensor (Bank 2, Sensor 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
16 ($22)	---	Oxygen sensor voltage rich behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
18 ($24)	---	Oxygen sensor voltage lean behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
1A ($26)	---	Oxygen sensor voltage in deceleration behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	103 mV	---
1C ($28)	---	Dynamic behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	5.2 mV/ms	---	---

Fig. 5: Mode 6 Data (2000-05 3.0L AVK) (Fig. 5 Of 8)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

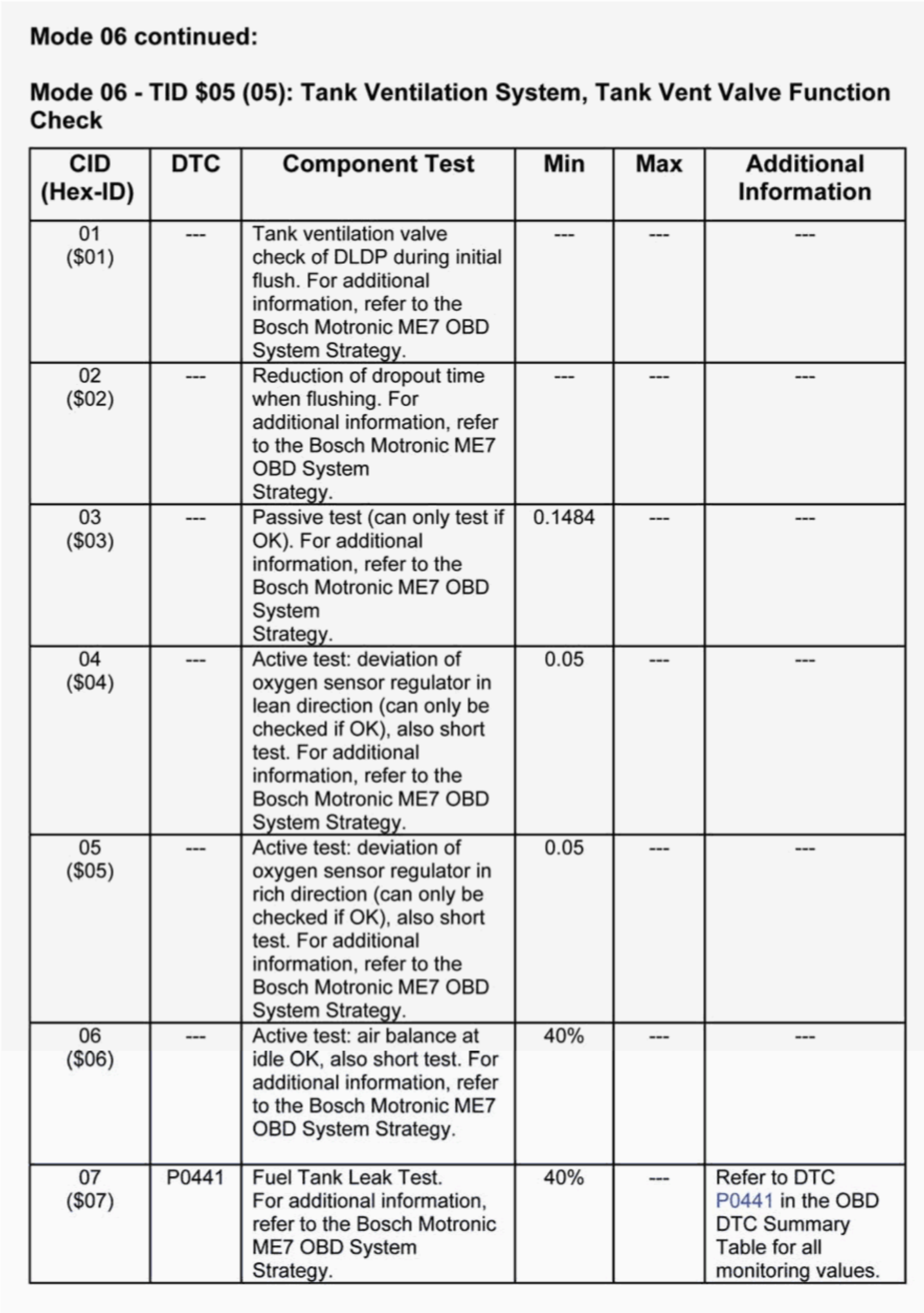
Mode 06 - TID $03 (03): Secondary Air Injection (AIR) System (Bank 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	P0491	Reduced secondary air mass bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.2969	---	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.
02 ($02)	P0491	Very low secondary air mass bank 1, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.0156	---	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.
03 ($03)	P0491	Leakage bank 1 (combination valve does not close), short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.2 kg/k	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.

Mode 06 - TID $03 (03): Secondary Air Injection (AIR) System (Bank 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
04 ($04)	P0492	Reduced secondary air mass bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.5	---	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.
05 ($05)	---	Leakage bank 2 (combination valve does not close), short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	4 kg/k	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.
06 ($06)	P0492	Very low secondary air mass bank 2, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.4	---	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.

Fig. 6: Mode 6 Data (2000-05 3.0L AVK) (Fig. 6 Of 8)
Courtesy of AUDI OF AMERICA, INC.

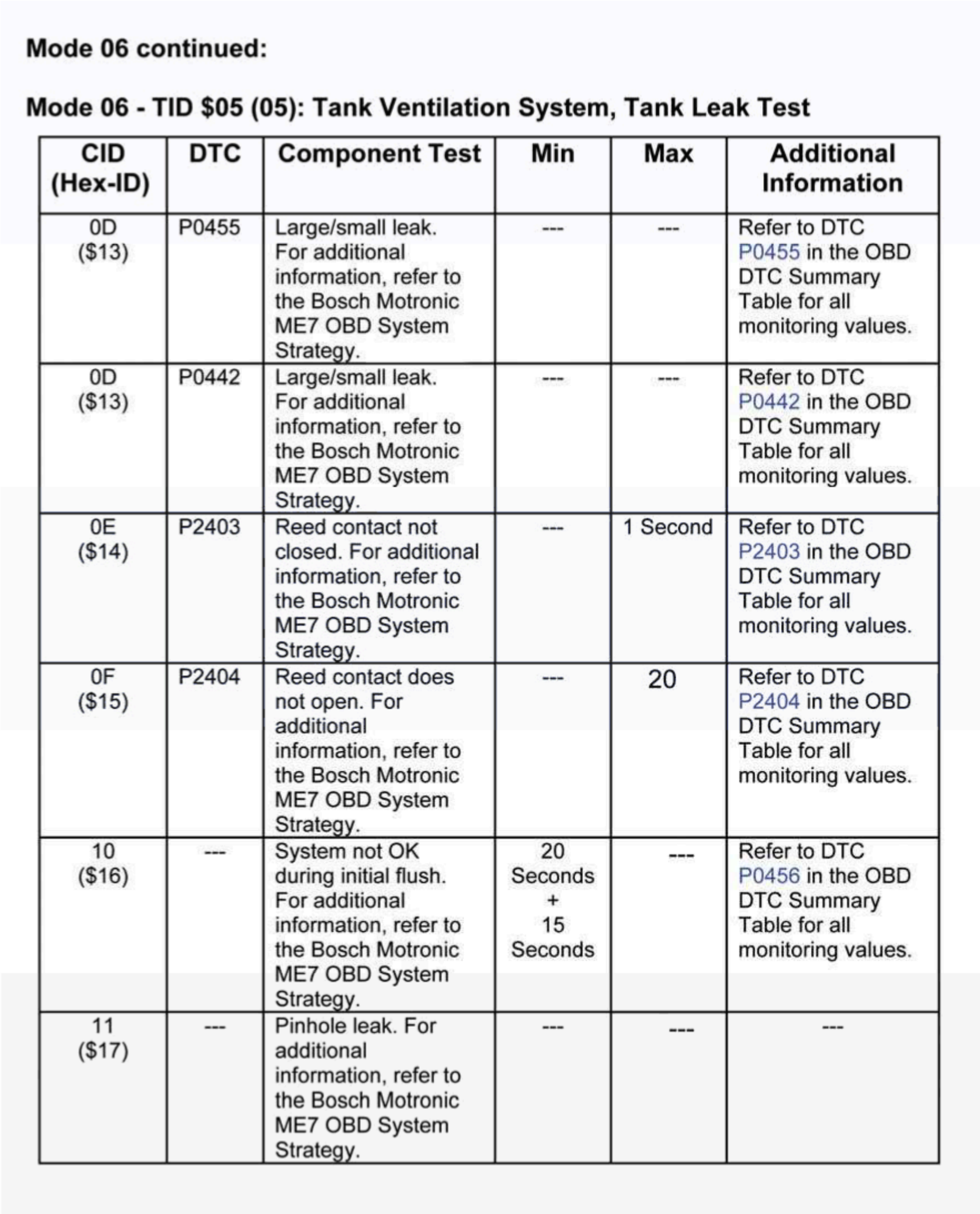


Mode 06 continued:

Mode 06 - TID $05 (05): Tank Ventilation System, Tank Vent Valve Function Check

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	---	Tank ventilation valve check of DLDP during initial flush. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
02 ($02)	---	Reduction of dropout time when flushing. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
03 ($03)	---	Passive test (can only test if OK). For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.1484	---	---
04 ($04)	---	Active test: deviation of oxygen sensor regulator in lean direction (can only be checked if OK), also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.05	---	---
05 ($05)	---	Active test: deviation of oxygen sensor regulator in rich direction (can only be checked if OK), also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.05	---	---
06 ($06)	---	Active test: air balance at idle OK, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	40%	---	---
07 ($07)	P0441	Fuel Tank Leak Test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	40%	---	Refer to DTC P0441 in the OBD DTC Summary Table for all monitoring values.

Fig. 7: Mode 6 Data (2000-05 3.0L AVK) (Fig. 7 Of 8)
Courtesy of AUDI OF AMERICA, INC.

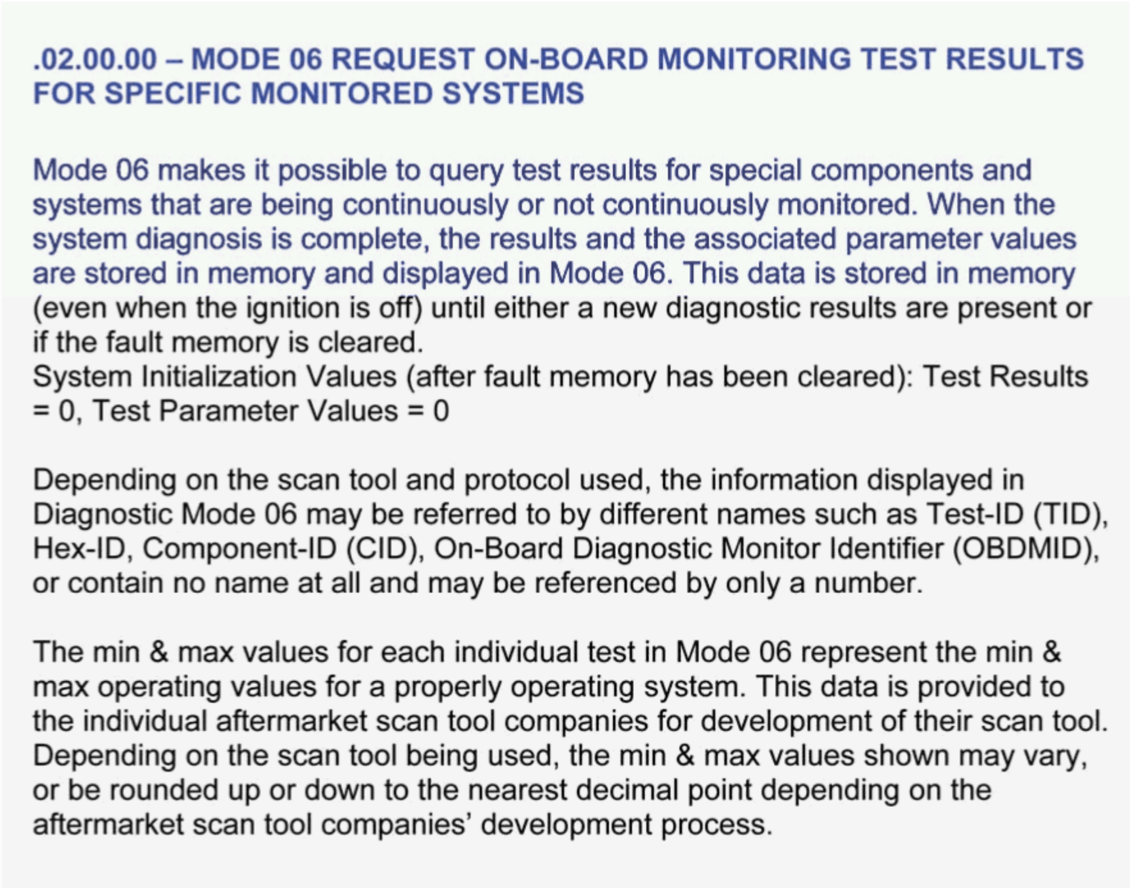


Mode 06 continued:

Mode 06 - TID $05 (05): Tank Ventilation System, Tank Leak Test

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
0D ($13)	P0455	Large/small leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	Refer to DTC P0455 in the OBD DTC Summary Table for all monitoring values.
0D ($13)	P0442	Large/small leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	Refer to DTC P0442 in the OBD DTC Summary Table for all monitoring values.
0E ($14)	P2403	Reed contact not closed. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1 Second	Refer to DTC P2403 in the OBD DTC Summary Table for all monitoring values.
0F ($15)	P2404	Reed contact does not open. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	20	Refer to DTC P2404 in the OBD DTC Summary Table for all monitoring values.
10 ($16)	---	System not OK during initial flush. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	20 Seconds + 15 Seconds	---	Refer to DTC P0456 in the OBD DTC Summary Table for all monitoring values.
11 ($17)	---	Pinhole leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---

Fig. 8: Mode 6 Data (2000-05 3.0L AVK) (Fig. 8 Of 8)
Courtesy of AUDI OF AMERICA, INC.



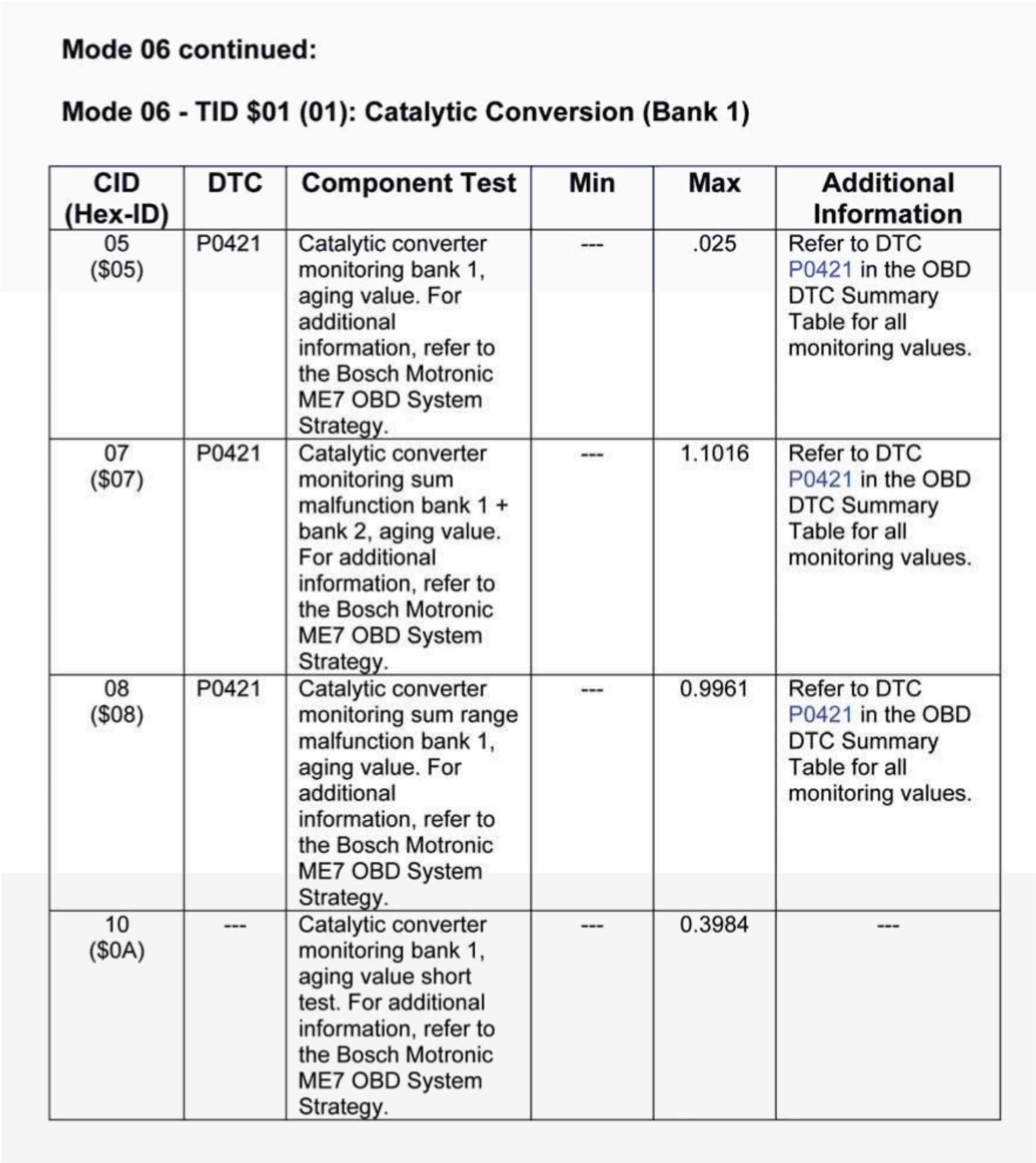
.02.00.00 – MODE 06 REQUEST ON-BOARD MONITORING TEST RESULTS FOR SPECIFIC MONITORED SYSTEMS

Mode 06 makes it possible to query test results for special components and systems that are being continuously or not continuously monitored. When the system diagnosis is complete, the results and the associated parameter values are stored in memory and displayed in Mode 06. This data is stored in memory (even when the ignition is off) until either a new diagnostic results are present or if the fault memory is cleared.
System Initialization Values (after fault memory has been cleared): Test Results = 0, Test Parameter Values = 0

Depending on the scan tool and protocol used, the information displayed in Diagnostic Mode 06 may be referred to by different names such as Test-ID (TID), Hex-ID, Component-ID (CID), On-Board Diagnostic Monitor Identifier (OBDMID), or contain no name at all and may be referenced by only a number.

The min & max values for each individual test in Mode 06 represent the min & max operating values for a properly operating system. This data is provided to the individual aftermarket scan tool companies for development of their scan tool. Depending on the scan tool being used, the min & max values shown may vary, or be rounded up or down to the nearest decimal point depending on the aftermarket scan tool companies' development process.

Fig. 9: Mode 6 Data (2004 3.0L BGN) (1 Of 8)
Courtesy of AUDI OF AMERICA, INC.

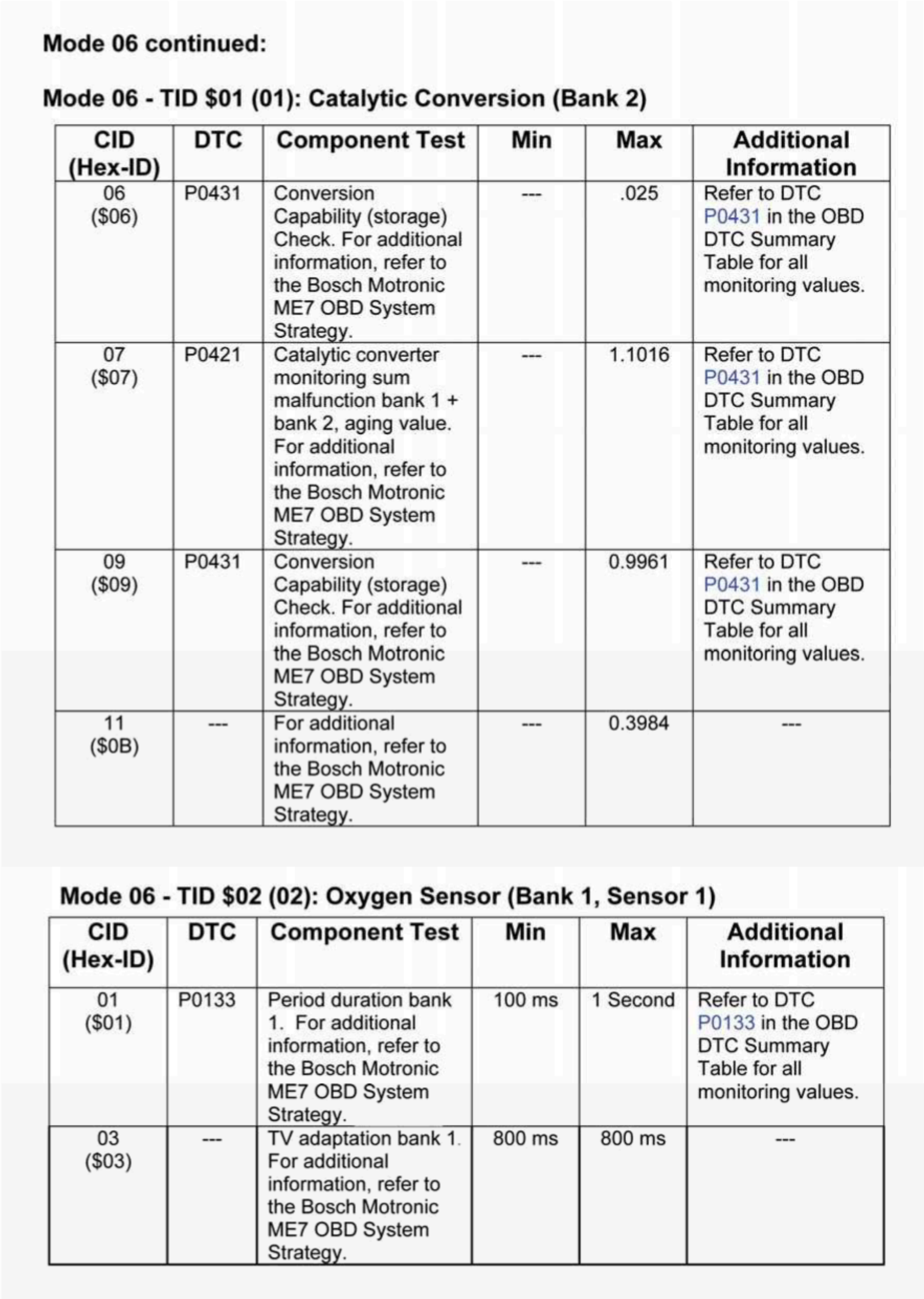


Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
05 ($05)	P0421	Catalytic converter monitoring bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
08 ($08)	P0421	Catalytic converter monitoring sum range malfunction bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
10 ($0A)	---	Catalytic converter monitoring bank 1, aging value short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

Fig. 10: Mode 6 Data (2004 3.0L BGN) (2 Of 8)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
06 ($06)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
09 ($09)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
11 ($0B)	---	For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	P0133	Period duration bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0133 in the OBD DTC Summary Table for all monitoring values.
03 ($03)	---	TV adaptation bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

Fig. 11: Mode 6 Data (2004 3.0L BGN) (3 Of 8)
Courtesy of AUDI OF AMERICA, INC.

Mode 06 continued:

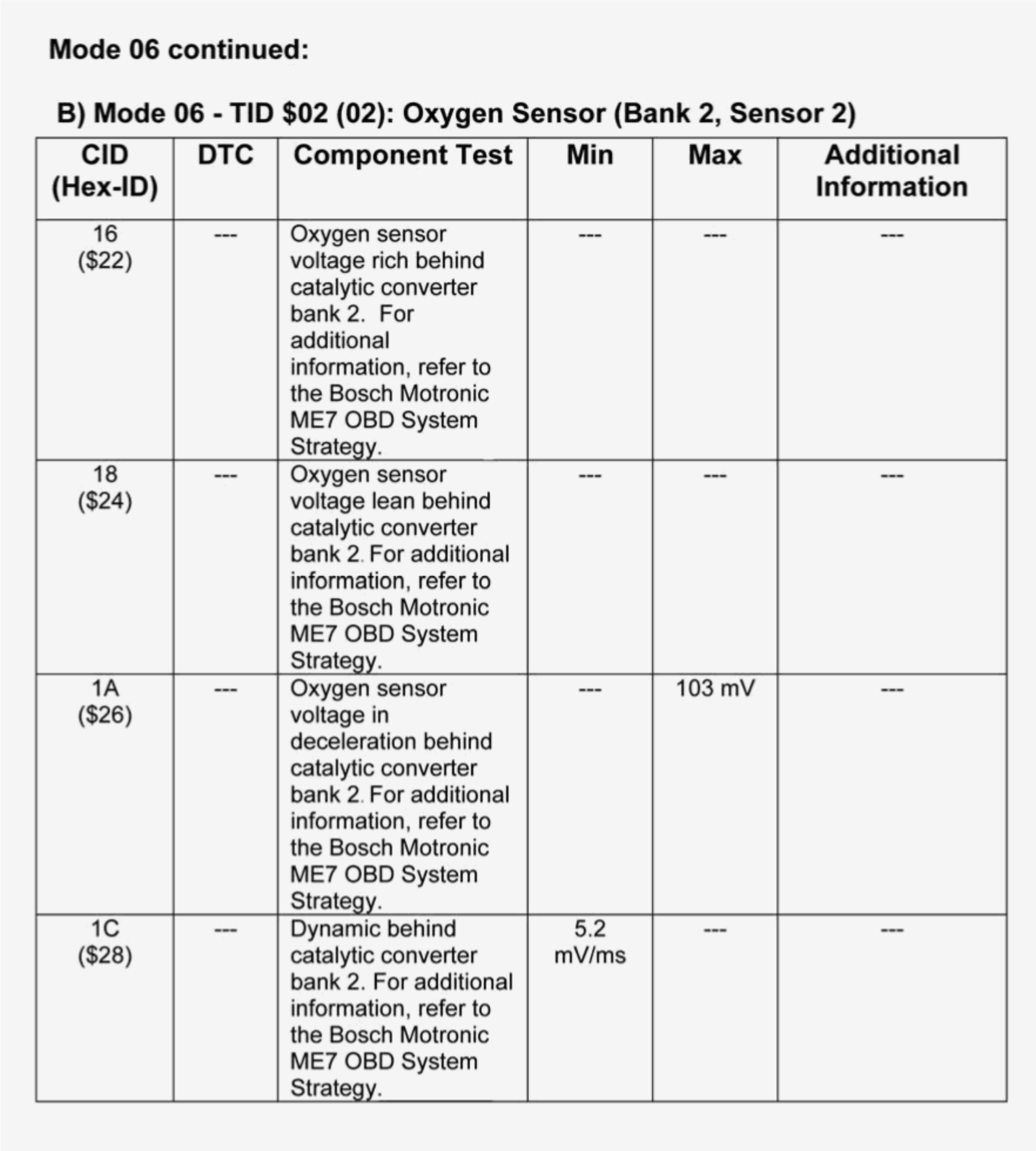
Mode 06 - TID $02 (02): Oxygen Sensor (Bank 2, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
02 ($02)	P0153	Period duration bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0153 in the OBD DTC Summary Table for all monitoring values.
04 ($04)	---	TV adaptation bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

A) Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
15 ($21)	---	Oxygen sensor voltage rich behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
17 ($23)	---	Oxygen sensor voltage lean behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
19 ($25)	---	Oxygen sensor voltage in deceleration behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	103 mV	---
1B ($27)	---	Dynamic behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	5.2 mV/ms	---	---

Fig. 12: Mode 6 Data (2004 3.0L BGN) (4 Of 8)
Courtesy of AUDI OF AMERICA, INC.

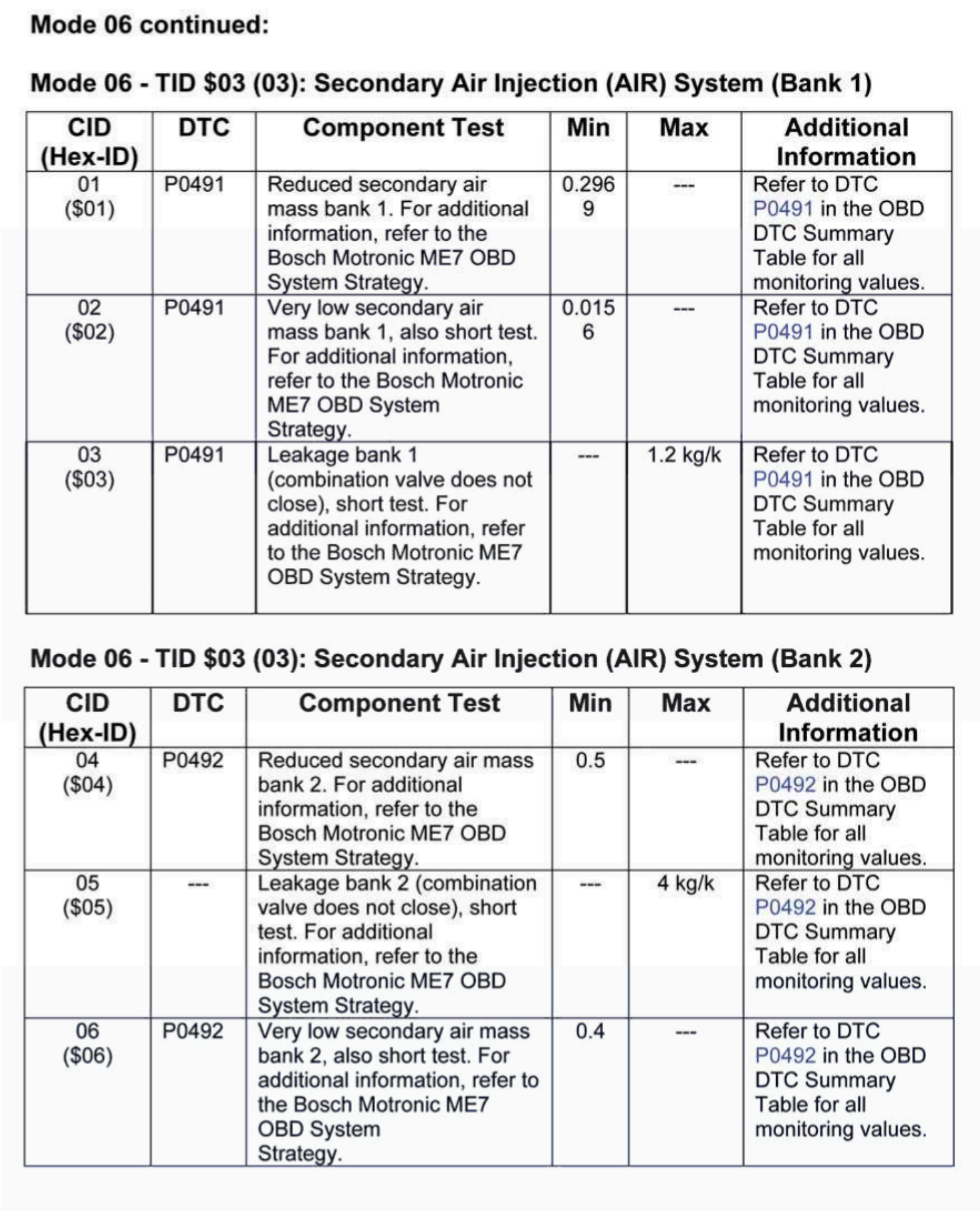


Mode 06 continued:

B) Mode 06 - TID $02 (02): Oxygen Sensor (Bank 2, Sensor 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
16 ($22)	---	Oxygen sensor voltage rich behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
18 ($24)	---	Oxygen sensor voltage lean behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
1A ($26)	---	Oxygen sensor voltage in deceleration behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	103 mV	---
1C ($28)	---	Dynamic behind catalytic converter bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	5.2 mV/ms	---	---

Fig. 13: Mode 6 Data (2004 3.0L BGN) (5 Of 8)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

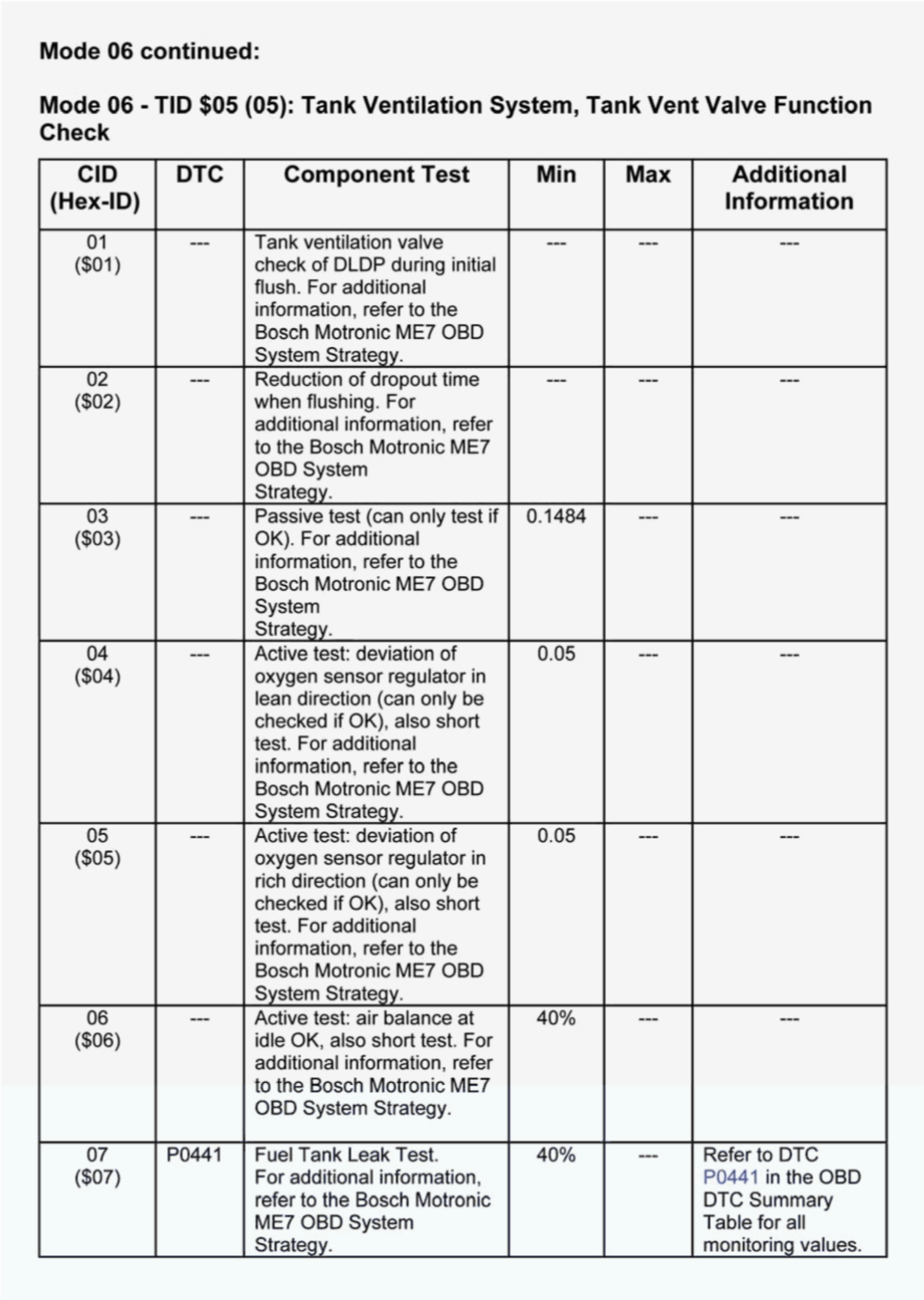
Mode 06 - TID $03 (03): Secondary Air Injection (AIR) System (Bank 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	P0491	Reduced secondary air mass bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.2969	---	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.
02 ($02)	P0491	Very low secondary air mass bank 1, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.0156	---	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.
03 ($03)	P0491	Leakage bank 1 (combination valve does not close), short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.2 kg/k	Refer to DTC P0491 in the OBD DTC Summary Table for all monitoring values.

Mode 06 - TID $03 (03): Secondary Air Injection (AIR) System (Bank 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
04 ($04)	P0492	Reduced secondary air mass bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.5	---	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.
05 ($05)	---	Leakage bank 2 (combination valve does not close), short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	4 kg/k	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.
06 ($06)	P0492	Very low secondary air mass bank 2, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.4	---	Refer to DTC P0492 in the OBD DTC Summary Table for all monitoring values.

Fig. 14: Mode 6 Data (2004 3.0L BGN) (6 Of 8)
Courtesy of AUDI OF AMERICA, INC.

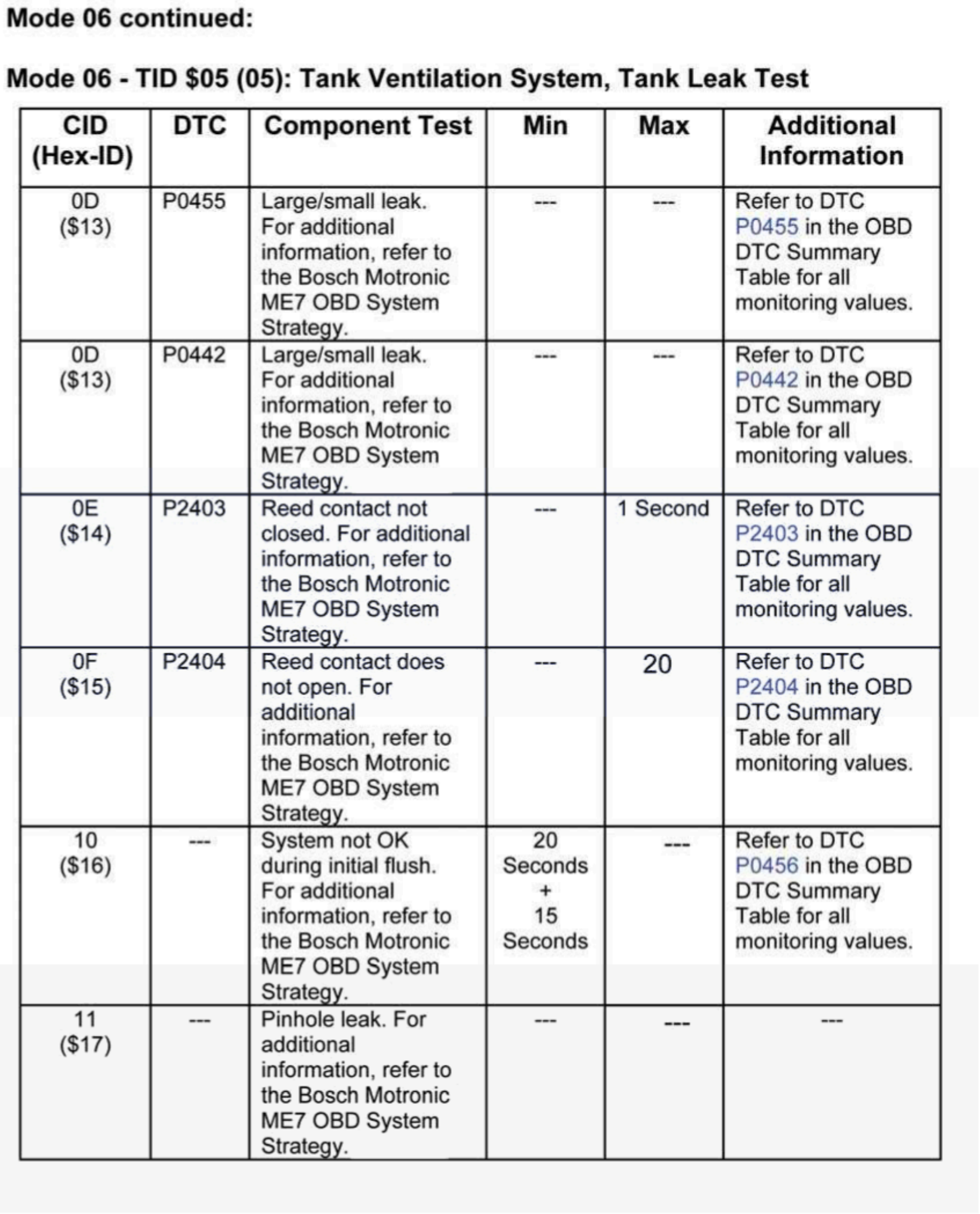


Mode 06 continued:

Mode 06 - TID $05 (05): Tank Ventilation System, Tank Vent Valve Function Check

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	---	Tank ventilation valve check of DLDP during initial flush. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
02 ($02)	---	Reduction of dropout time when flushing. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
03 ($03)	---	Passive test (can only test if OK). For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.1484	---	---
04 ($04)	---	Active test: deviation of oxygen sensor regulator in lean direction (can only be checked if OK), also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.05	---	---
05 ($05)	---	Active test: deviation of oxygen sensor regulator in rich direction (can only be checked if OK), also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	0.05	---	---
06 ($06)	---	Active test: air balance at idle OK, also short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	40%	---	---
07 ($07)	P0441	Fuel Tank Leak Test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	40%	---	Refer to DTC P0441 in the OBD DTC Summary Table for all monitoring values.

Fig. 15: Mode 6 Data (2004 3.0L BGN) (7 Of 8)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

Mode 06 - TID $05 (05): Tank Ventilation System, Tank Leak Test

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
0D ($13)	P0455	Large/small leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	Refer to DTC P0455 in the OBD DTC Summary Table for all monitoring values.
0D ($13)	P0442	Large/small leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	Refer to DTC P0442 in the OBD DTC Summary Table for all monitoring values.
0E ($14)	P2403	Reed contact not closed. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1 Second	Refer to DTC P2403 in the OBD DTC Summary Table for all monitoring values.
0F ($15)	P2404	Reed contact does not open. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	20	Refer to DTC P2404 in the OBD DTC Summary Table for all monitoring values.
10 ($16)	---	System not OK during initial flush. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	20 Seconds + 15 Seconds	---	Refer to DTC P0456 in the OBD DTC Summary Table for all monitoring values.
11 ($17)	---	Pinhole leak. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---

Fig. 16: Mode 6 Data (2004 3.0L BGN) (8 Of 8)
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2000-05 ENGINE PERFORMANCE

Mode 6 - A4, S4, RS4

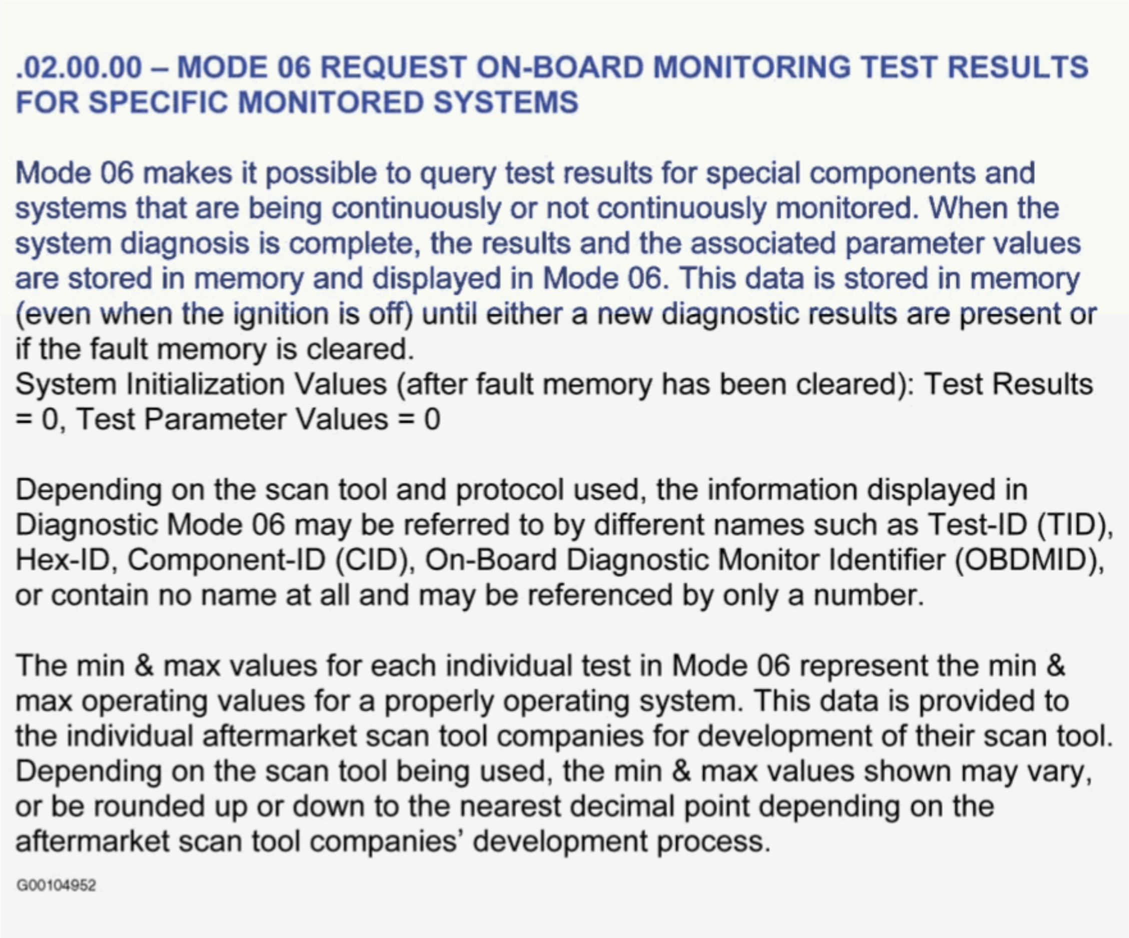
INTRODUCTION

Mode 6 is designed to allow access to the results of onboard diagnostic monitoring tests of specific components/systems that are not continuously monitored. These systems include the catalytic converter, EVAP system, oxygen sensor, oxygen sensor heater, EGR system, secondary AIR system, and sometimes misfire.

Mode 6 data is output from the PCM/ECM in hexadecimal form. The $ sign indicates a hexadecimal number. Depending on the software in the scanner, the output could be displayed in hexadecimal numbers (no conversion), raw data (conversion to decimal numbers), or measurable values (applying conversion factor to raw data).

Before reading mode 6 information, ensure that the monitor for the information you are accessing has run to completion. If the monitor is not complete, the mode 6 data will not be accurate.

MODE 6



.02.00.00 – MODE 06 REQUEST ON-BOARD MONITORING TEST RESULTS FOR SPECIFIC MONITORED SYSTEMS

Mode 06 makes it possible to query test results for special components and systems that are being continuously or not continuously monitored. When the system diagnosis is complete, the results and the associated parameter values are stored in memory and displayed in Mode 06. This data is stored in memory (even when the ignition is off) until either a new diagnostic results are present or if the fault memory is cleared.
System Initialization Values (after fault memory has been cleared): Test Results = 0, Test Parameter Values = 0

Depending on the scan tool and protocol used, the information displayed in Diagnostic Mode 06 may be referred to by different names such as Test-ID (TID), Hex-ID, Component-ID (CID), On-Board Diagnostic Monitor Identifier (OBDMID), or contain no name at all and may be referenced by only a number.

The min & max values for each individual test in Mode 06 represent the min & max operating values for a properly operating system. This data is provided to the individual aftermarket scan tool companies for development of their scan tool. Depending on the scan tool being used, the min & max values shown may vary, or be rounded up or down to the nearest decimal point depending on the aftermarket scan tool companies' development process.

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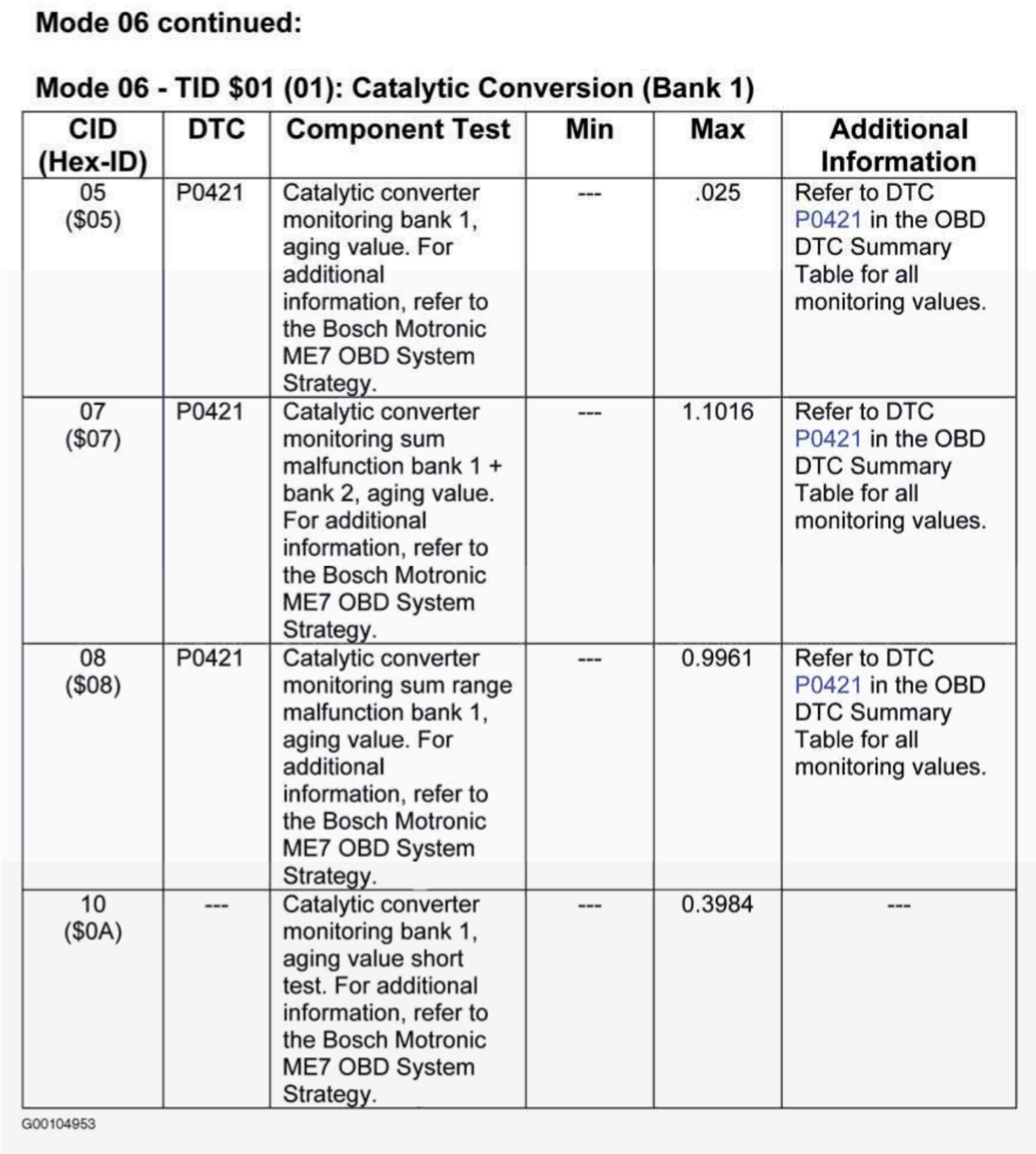
Fig. 1: Mode 6 Data (2000-05 3.0L AVK) (1 Of 4)
Courtesy of AUDI OF AMERICA, INC.



Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
05 ($05)	P0421	Catalytic converter monitoring bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
08 ($08)	P0421	Catalytic converter monitoring sum range malfunction bank 1, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0421 in the OBD DTC Summary Table for all monitoring values.
10 ($0A)	---	Catalytic converter monitoring bank 1, aging value short test. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

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Fig. 2: Mode 6 Data (2000-05 3.0L AVK) (2 Of 4)
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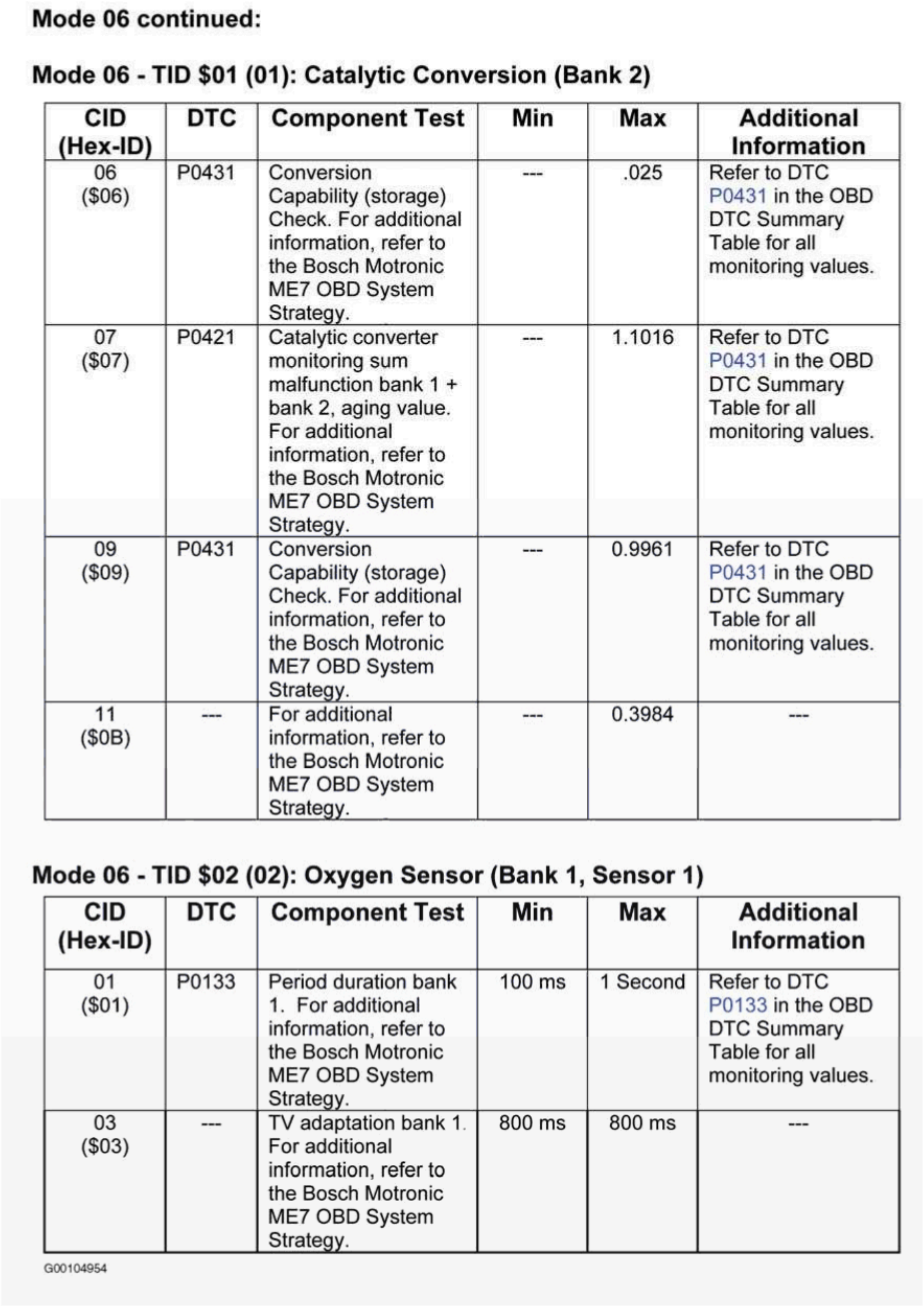

Mode 06 continued:

Mode 06 - TID $01 (01): Catalytic Conversion (Bank 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
06 ($06)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	.025	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
07 ($07)	P0421	Catalytic converter monitoring sum malfunction bank 1 + bank 2, aging value. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	1.1016	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
09 ($09)	P0431	Conversion Capability (storage) Check. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.9961	Refer to DTC P0431 in the OBD DTC Summary Table for all monitoring values.
11 ($0B)	---	For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	0.3984	---

Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
01 ($01)	P0133	Period duration bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0133 in the OBD DTC Summary Table for all monitoring values.
03 ($03)	---	TV adaptation bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

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Fig. 3: Mode 6 Data (2000-05 3.0L AVK) (3 Of 4)

Courtesy of AUDI OF AMERICA, INC.

Mode 06 continued:

Mode 06 - TID $02 (02): Oxygen Sensor (Bank 2, Sensor 1)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
02 ($02)	P0153	Period duration bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	100 ms	1 Second	Refer to DTC P0153 in the OBD DTC Summary Table for all monitoring values.
04 ($04)	---	TV adaptation bank 2. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	800 ms	800 ms	---

A) Mode 06 - TID $02 (02): Oxygen Sensor (Bank 1, Sensor 2)

CID (Hex-ID)	DTC	Component Test	Min	Max	Additional Information
15 ($21)	---	Oxygen sensor voltage rich behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
17 ($23)	---	Oxygen sensor voltage lean behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	---	---
19 ($25)	---	Oxygen sensor voltage in deceleration behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System Strategy.	---	103 mV	---
1B ($27)	---	Dynamic behind catalytic converter bank 1. For additional information, refer to the Bosch Motronic ME7 OBD System	5.2 mV/ms	---	---

Fig. 4: Mode 6 Data (2000-05 3.0L AVK) (4 Of 4)
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